Product Description Document (PDD) for beta.aviationweather.gov

Aviation Weather Center
Updated March 2022

Part 1 - Mission Connection

a) Product Description

The Aviation Weather Center (AWC) maintains the NWS's flagship aviation weather website at https://www.aviationweather.gov. A broad range of clients within the aviation community rely on this website to access aviation-related weather observations, analyses, and forecasts. Weather information is made available in multiple formats including text, digital grids, tables, static images, and interactive map displays.

AWC has been working on a significant upgrade to the website to improve the site's consistency, supportability, mobile friendliness, performance, ease of use, and ease of new development. These changes are aligned with goals described in the National Centers for Environmental Prediction (NCEP) Strategic Plan and in the National Weather Service (NWS) Strategic Plan.

The proposed upgrade will be hosted at https://beta.aviationweather.gov through October 31, 2022. This will allow enough time for users to explore the capabilities of the upgraded site, acclimate to the changes, and identify any critical issues for AWC web developers to resolve before the upgraded site replaces the existing site at www.aviationweather.gov.

b) Purpose/Intended Use

The current website was developed at a time when nearly all users accessed it on a personal computer or office workstation. Internet usage patterns have evolved since that time, and nearly half of all users are now accessing websites through mobile devices such as tablets or cell phones. The current site is difficult to use on cell phones because it was not designed for that purpose. To address this issue, AWC developers approached the website upgrade with a mobile-first mindset and designed it so that pages will adjust automatically for different screen sizes. This approach to web page development makes it easier to use the site on different platforms such as large display screens, personal computers, tablets, and cell phones. The site will be easier to support, maintain, and update because there is a single version of the website code for all platforms.

The current website offers many different tools and interfaces across dozens of pages. One goal with this upgrade was to consolidate some pages and interfaces into a common framework to reduce code duplication, make it easier to deploy new features, and make it easier to support and maintain the site. Consolidation also standardizes the look and feel across all pages. One example of this consolidation was to move the capabilities of the Helicopter Emergency Medical Services (HEMS) tool into a low-altitude (LA) mode of the Graphical Forecasts for Aviation (GFA) tool.

The following display/tools from the current website are integrated into the new website as follows::

Display/Tool	Where the content/functionality can be found
HEMS Tool	Services are integrated into the base display
GFA	Services are integrated into the base display
Flight Folder	Services are integrated into the base display
Flight Path Tool	Functionality is available via cross section
METAR Board	Functionality is integrated into the Terminal Weather Dashboard
TAF Board	Functionality is integrated into the Terminal Weather Dashboard
Standard Briefing Page	Functionality is integrated into the base display

Center Weather Service Unit (CWSU) meteorologists create briefing packages for the air traffic controllers at their facilities as part of their routine duties. Most of these briefing packages rely on static imagery from AWC's website. However, there is no single place on https://www.aviationweather.gov which lists all of the available static images. The upgraded site addresses this issue with a dedicated page for Decision Support Services (DSS) imagery.

The current website was built on a technology stack which is no longer meeting the needs of AWC developers or users. With this upgrade, the developers have switched to a modern User Interface (UI) technology stack to improve the site's performance, security, and ease of use.

c) Audience

The target audience for https://beta.aviationweather.gov is all current and future users of the current site at https://www.aviationweather.gov. This includes but is not limited to pilots (including fixed wing, helicopters, drone, and hot air balloon), air traffic controllers, Center Weather Service Unit (CWSU) meteorologists, Weather Forecast Office (WFO) meteorologists with aviation responsibilities, airline personnel, flight planners, briefers, dispatchers, and other members of the aviation community.

d) Presentation Format

The proposed upgrade to the website will be hosted at https://beta.aviationweather.gov. It will be maintained separately from the operational website hosted at https://www.aviationweather.gov. This will allow users to explore the upgraded version and compare it to the current website.

e) Feedback Method

Feedback on this capability will be captured via survey, as advertised on the website. The Aviation Weather Testbed at AWC will also work closely with the FAA to gather additional feedback on the capability.

For further information or to provide feedback, please contact:

Jennifer Stroozas
Warning Coordination Meteorologist
Aviation Weather Center
Kansas City, MO
Phone: 816-359-8837
Email: jennifer.stroozas@noaa.gov

or

Austin Cross
Techniques Development Meteorologist
Aviation Weather Center
Kansas City, MO
913-626-8694
austin.cross@noaa.gov

Part 2 - Technical Description

a) Format and Science Basis

The proposed upgrade will be hosted at https://beta.aviationweather.gov. The site was written with HTML, CSS, and JavaScript. It uses modern web development libraries such as Bootstrap for responsive design and Leaflet for interactive maps.

b) Training

The website hosted on https://beta.aviationweather.gov includes training materials for current and new users. The main help page is available by clicking on the "?" in the upper right. This help page includes a site overview, an in-depth tutorial, Frequently Asked Questions (FAQs), and links to other pages with more detailed help on specific components of the site. Context-dependent help is also available within GFA. Short training videos are being planned and will be posted to the site after they are completed.

c) Availability

The proposed website upgrade will be hosted at https://beta.aviationweather.gov. It will be available from March 29, 2022 through October 31, 2022. It will be supported during normal

business hours on weekdays during the test period. There may be brief periods when the site is down for maintenance.

After the proposed website upgrade has been deployed to https://www.aviationweather.gov, it will be supported operationally with 24/7 availability.